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Owners Guide & Installation Instruction Supplement

SOFT-MINDER® TWIN w/ACME THREADS MODELS FROM 2003

The Culligan logo is written in a black, cursive script font. The word "Culligan" is followed by a registered trademark symbol (®).

Thank You

And welcome to your new world of better living with Culligan water.

The Culligan Soft-Minder Twin™ Water Softeners are tested and certified by WQA according to WQA S-100 for hardness reduction (calcium and magnesium).

For installations in Massachusetts, the Commonwealth of Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of the system. This system and its installation must comply with state and local regulations.



If this is your first experience having soft, conditioned water in your home, you'll be amazed at the marvelous difference it makes. We promise that you'll never want to be without it again.

Congratulations, too, on selecting one of the "first family" of water conditioners in the prestigious Culligan Gold Series. With Culligan's many years of knowledge and experience in water treatment, you can be confident that the model you selected has been designed and engineered to provide years of service with a minimum of care and attention.

Some localities have corrosive water. A water softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Dealer has equipment to control the problem.

Sodium Information: *Water softeners using sodium chloride for regeneration add sodium to the water. Persons who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake.*

Attention Culligan Customer:

Your local independently operated Culligan dealer employs trained service and maintenance personnel who are experienced in the installation, function and repair of Culligan equipment. This publication is written specifically for these individuals and is intended for their use.

We encourage Culligan users to learn about Culligan products, but we believe that product knowledge is best obtained by consulting with your Culligan dealer. Untrained individuals who use this manual assume the risk of any resulting property damage or personal injury.



WARNING - Prior to servicing equipment, disconnect power supply to prevent electrical shock.

Owners Guide & Installation Instruction Supplement

SOFT-MINDER® TWIN w/ACME THREADS MODELS FROM 2003

- ☐ Culligan Soft-Minder Twin 60 Water Softener
- ☐ Culligan Soft-Minder Twin 90 Water Softener

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Performance Data Sheets are included in this manual for various Culligan Soft-Minder Twin™ Softener models. Refer to the Performance Data Sheet for your specific softener, as there are slight differences between the models. The softener warranty is located on page 18 of this Owner's Guide.

Specifications

Culligan Soft-Minder Twin™ Water Conditioners

	60 Model	90 Model
Control Valve	5-cycle	5-cycle
Overall Conditioner Height	56 in. (142.24 cm)	62 in. (157.48 cm)
Media Tank Dimensions (Dia. x Ht.)	9 x 48 in.	10 x 54 in.
Salt Storage Tank Dimensions (Dia. x Ht.)	16 x 43 in.	18 x 43 in.
Exchange Media, Type & Quantity	406 x 1,092 mm	457 x 1,092 mm
Underbedding, Type & Quantity	Cullex® Media, 1.0 ft³	Cullex Media, 1.5 ft³
Exchange Capacity @ Salt	Cullsán Underbedding, 12 lb.	Cullsán Underbedding, 15 lb.
Dosage Per Recharge	14,600 gr @ 3 lb.	21,900 gr @ 4.5 lb.
	29,400 gr @ 9 lb.	44,000 gr @ 13.5 lb.
	33,800 gr @ 15 lb.	50,700 gr @ 22.5 lb.
Efficiency rated dosage¹	4,880 gr/lb	4,880 gr/lb
Freeboard to Media²	14.5 in.	14.5 in.
Freeboard to Underbedding³	44.5 in.	47.5 in.
Salt Storage Capacity	350 lb.	375 lb.
Rated Service Flow @ Pressure Drop	10.4 gpm @ 15 psi	10.4 gpm @ 15 psi
Total Hardness, Maximum	75 gpg	99 gpg
Total Iron, Maximum (dissolved)	5 ppm	5 ppm
Hardness to Iron Ratio, Minimum	8 gpg to 1 ppm	8 gpg to 1 ppm
	140 mg/L to 1 mg/L	140 mg/L to 1 mg/L
Operating Pressure	20 - 125 psi	20 - 125 psi
Operating Pressure (Canada)	20 - 90 psi	20 - 90 psi
Operating Temperature	33 - 120°F	33 - 120°F
Electrical Requirements	120V/60 Hz	120V/60 Hz
Electrical Power Consumption, Min./Max.	3 Watts	3 Watts
Drain Flow, Maximum⁴	2.0 gpm	2.0 gpm
Recharge Time, Average⁵	65 min.	70 min.
Recharge Water Consumption	55 gal.	110 gal.

1 The efficiency rated dosage is only valid at the 3.0 lb. salt dosage for the model 60 and 4.5 lb. salt dosage for the model 90.

2 Measured from top of media to top surface of tank threads (backwashed and drained).

3 Measured from top of underbedding to top of inlet fitting.

4 Backwash at 120 psi (830 kPa).

5 10 minute backwash, 3 lb. (1.8 kg) model 60 or 4.5 lb. (2.7 kg) model 90 salt dosage at 30 psi (204 kPa).

IT'S ALL SO EASY, SO ECONOMICAL, SO EFFICIENT, SO ENJOYABLE!

KIND TO SKIN AND COMPLEXION

Soft water will help prevent red, itchy or dry skin because there are no hardness impurities to cause soreness, no soap curd to coat the skin. Shaving is easier, smoother - either with blade or electric shaver.

BATHING AND SHOWERING

You'll use far less soap with conditioned water. Use your soap very sparingly - not as you did before soft water. Just a quick rinse removes all lather, leaving your skin pleasantly smooth and silky - because now it's free of sticky soap curd and film.

SAVES WASHING COSTS. HELPS CONTROL ENVIRONMENTAL POLLUTION

Soft water washes whiter and cleaner with less soap or detergent. Because the hardness impurities are removed, your soap can concentrate solely on washing. People usually find that they can reduce the amount of soap they use substantially. If you normally used a cup per wash load with hard water, try using only 1/3 cup depending on the size of your wash load and the degree of soil. Different amounts are required, but you can use less with softened water. An added bonus is the fact that your washable fabrics will last longer.

SUPER HAIR CONDITIONING

Soft water is great for scalp and hair care. No insoluble deposits are formed. Hair is shinier, softer, more manageable. Reduce the amount of shampoo you have normally used.

DISHES ARE A DELIGHT

Washed by hand or in a dishwasher, glassware, dishes and silver wash cleaner, easier. Follow your dishwasher manufacturer's instructions. Soft water promotes sanitation because no greasy hard water film can form to collect or harbor bacteria.

EASIER HOUSEKEEPING, GLEAMING FIXTURES

You'll be amazed at the marvelous difference. Just a swish of the cloth, and the bathtub or shower and fixtures are clean and sparkling. Imagine, no scouring! No hard water scum to cause rings, streaks, spots and stains. To keep their gleaming luster, simply wipe fixtures with a towel after use. Formica, tile, walls, floors, woodwork surfaces clean easier, stay clean longer. You'll save on cleaning aids and save on time.

SAVES WATER-HEATING ENERGY, HELPS WATER-USING APPLIANCES

Soft water reduces the formation of rock-like hard water scale which encrusts water heaters, hot water pipes, shower heads, and water-using appliances. This scale can cause premature maintenance and failure.

Elimination of hard water also provides substantial energy savings because scale acts as an insulator, wasting electricity or gas used to heat water.

SAVINGS GALORE

A water conditioner is frequently referred to as "the appliance that pays for itself". You'll find that your savings on soaps, detergents, cleaning aids, and personal care products will help your family's household budget. And if you place a price on your time, you'll be most happy with the time saved by your new family servant.

WATER FOR LAWNS AND HOUSEHOLD PLANTS

If possible, lawn sprinkling faucets should be supplied with hard water primarily because it is uneconomical to soften so much water.

Household plants are much more sensitive than lawns with respect to the kind of water which is best. First, because they receive no rainfall and, second, there is little or no drainage of the soil. Preferably they should be watered with rain water or water which is low in mineral content such as distilled or demineralized water. Softened water is not recommended for house plants because a build-up of sodium in the soil may interfere with efficient absorption of water by the plant root system. Additional information may be obtained from your independently operated Culligan dealer.

Introduction

How Your Water Conditioner Works

Why Water Gets Hard And How It's Softened

All of the fresh water in the world originally falls as rain, snow, or sleet. Surface water is drawn upward by the sun, forming clouds. Then, nearly pure and soft as it starts to fall, it begins to collect impurities as it passes through smog and dust-laden atmosphere. And as it seeps through soil and rocks it gathers hardness, rust, acid, unpleasant tastes and odors.

Water hardness is caused primarily by limestone dissolved from the earth by rainwater. Because of this, in earlier times people who wanted soft water collected rainwater from roofs in rain barrels and cisterns before it picked up hardness from the earth.

Some localities have corrosive water. A softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Man has equipment to control the problem.

Iron is a common water problem. The chemical/physical nature of iron found in natural water supplies is exhibited in four general types:

1. Dissolved Iron - Also called ferrous or "clear water" iron. This type of iron can be removed from the water by the same ion exchange principle that removes the hardness elements, calcium and magnesium. Dissolved iron is soluble in water and is detected by taking a sample of the water to be treated in a clear glass. The water in the glass is initially clear, but on standing exposed to the air, it may gradually turn cloudy or colored as it oxidizes.
2. Particulate Iron - Also called ferric or colloidal iron. This type of iron is an undissolved particle of iron. A softener will remove larger particles, but they may not be washed out in regeneration effectively and will eventually foul the ion exchange resin. A filtering treatment will be required to remove this type of iron.
3. Organic Bound Iron - This type of iron is strongly attached to an organic compound in the water. The ion exchange process alone cannot break this attachment and the softener will not remove this type of iron.
4. Bacterial Iron - This type of iron is protected inside a bacteria cell. Like the organic bound iron, it is not removed by a water softener.

When using a softener to remove both hardness and dissolved iron it is important that it regenerates more frequently than ordinarily would be calculated for hardness removal alone. Although many factors and formulas have been used to determine this frequency, it is recommended that the softener be regenerated when it has reached 50 - 75% of the calculated hardness alone capacity. This will minimize the potential for bed fouling (Iron removal claims have not been verified by the Water Quality Association).

If you are operating a water softener on clear water iron, regular resin bed cleaning is needed to keep the be from coating with iron. Even when operating a softener on water with less than the maximum of dissolved iron, regular cleanings should be performed. Clean every six months or more often if iron appears in your conditioned water supply. Use resin bed cleaning compounds carefully following the directions on the container.



CAUTION: Do not use where the water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit.

Hardness sample kits are available through your local Culligan dealer.

The Culligan Process

Your Culligan water conditioner consists of three basic components, (A) the Control Valve, (B) the Mineral Tank, and (C) the Brine System.

- A. The exclusive Culligan control valve automatically performs a variety of tasks that are necessary for the proper operation of your water conditioner. These tasks, commonly referred to as cycles or operating positions, are:

SERVICE, REGENERATION, AND BRINE REFILL.

1. **SERVICE:** While the control valve is in the "Service cycle", hard water is directed down through the column of Cullex® resin where hardness minerals are removed from the water. The softened water is then directed into your household plumbing lines. The ability of the Cullex resin to remove hardness minerals needs to be periodically replenished; this is referred to as . . .
2. **REGENERATION:** While the control valve is in the "Regeneration cycle", water is first directed up through the column of Cullex resin to flush accumulated sediment out of the resin and down the drain. Then, the regenerant brine solution is slowly drawn from the bottom of the salt storage tank of the Brine System and is directed down through the column of Cullex resin, restoring the ability of the resin to remove hardness minerals from your water supply. Once completed, the regeneration cycle is followed by . . .
3. **BRINE REFILL:** While the control valve is in the "Brine Refill cycle", a predetermined amount of water is directed to the salt storage tank of the Brine System so that additional salt can be dissolved to provide the brine solution that will be needed for the next regeneration cycle.

- B. The exclusive Quadra-Hull™ Mineral Tank contains the Cullex resin column, Cullsant® underbedding, and an outlet manifold. The number of gallons of hard water that can be softened by the Cullex resin column before it needs regeneration is called the "capacity" of the resin column, and depends upon the amount of hardness minerals in each gallon of water (expressed as grains per gallon) and upon the amount of regenerant brine solution (expressed as pounds of salt) passed through the resin column during regeneration.

Your Culligan service person, taking into account the hardness of your water and the amount of softened water your household may reasonably expect to use each day, has carefully established how often the softener will regenerate and how much salt will be used for each regeneration. This will ensure that all of your soft water needs will be fulfilled without using an excessive amount of salt.

- C. The Brine System consists of a salt storage container and hydraulic Dubl-Safe™ valve. The salt storage container holds the salt that is used to make the regenerant brine solution. The hydraulic Dubl-Safe valve limits the amount of water that is returned to the salt storage tank during the brine refill cycle.

Since a predetermined amount of salt is dissolved with each brine refill cycle, the salt must be periodically replenished in order to maintain efficient operation. Your Culligan service person will be able to tell you about how often salt must be added to the salt storage container.

Preparation

WATER PRESSURE

A minimum water pressure of 25 lbs is necessary for the regeneration valve to operate properly.

ELECTRICAL

The system requires a continuous current of 110 volts, 60 Hertz. Make certain the electrical supply is always hot and cannot be turned off with another switch.

PLUMBING

The piping should be free from lime and iron buildup. Replace pipes that have a heavy build-up of lime or iron. If piping is clogged with iron, then a separate iron filter should be installed ahead of the water softener.

LOCATION

Position the softener close to a drain and electrical outlet. (Fig. 1)

BYPASS SYSTEM

A bypass valve is recommended for all installations.

COMPONENT DESCRIPTION

The water conditioner is shipped in three cartons. Remove all components from the cartons, inspect for damage and inventory contents prior to starting the installation.

CONTROL VALVE ASSEMBLY

Includes the regeneration control valve and electronic timer assembly. A small parts package contains installation hardware and consumer literature, including an Owner's Guide/Installation Supplement and warranty policy.

MEDIA TANK

Contains the center opening Quadra-Hull™ tank complete with Cullex® ion exchange resin and outlet manifold.

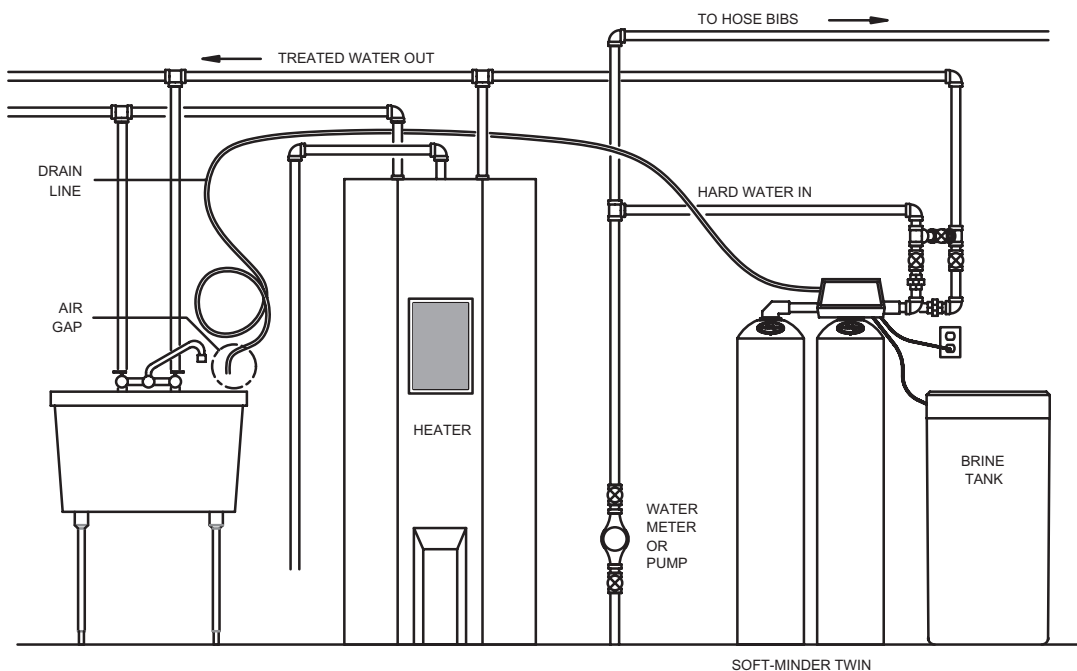


FIG. 1

SALT STORAGE TANK

Includes a salt storage tank with support plate and Dubl-Safe™ brine refill valve and chamber.

TOOLS/EQUIPMENT

Secure the following tools and equipment depending on installation method. Observe all applicable codes.

EQUIPMENT

- Safety glasses
- Screwdrivers, Phillips, small/medium tip
- Pressure gauge, PN 00-3044-50
- Silicone lubricant, PN 00-4715-07
 - Do not use petroleum-based lubricants
- Bucket, light colored
- Towels

SPECIAL TOOLS

- Torch, solder and flux for sweating copper connections
- Threading tools, pipe wrenches for threaded connections
- Saw, solvent and cement for plastics connections

MATERIALS

- Brine line, 5/16", PN 00-3031-28
- Drain line, 1/2", PN 00-3031-82, gray, semi-flexible/PN 00-3319-46, black, semi-rigid
- Thread sealing tape
- Pressure reducing valve/when pressure exceeds 120 psi (830 kPa) PN 00-4009-00
- Pipe and fittings
- Water softener salt

BYPASS VALVE

A bypass valve is included with the control valve assembly.

This supplement contains important information about the Soft-Minder Twin Plus automatic water conditioner, including instructions covering installation of the control valve, tank adapter, interconnecting piping between the two mineral tanks, and timer adjustments. For additional information, please refer to the Model 9000 Service manual packed with the control.

Before starting the installation, make certain the water meets the required limitations as shown in Table 1 (next page). Review the specifications for the unit to be certain all application requirements have been met. Also, carefully review the Model 9000 Service Manual, paying particular attention to the regeneration cycle program setting procedure.

Application

WATER QUALITY

Verify that the raw water hardness and iron are within the limits shown in Table 1. The salt dosage and recharge frequency should be noted according to the water hardness.

PRESSURE

If pressure exceeds 120 psi (830 kPa), install a pressure reducing valve. On private water systems, make sure the minimum pressure (the pressure at which the pump starts) is greater than 20 psi (140 kPa). Adjust the pressure switch if necessary.



CAUTION: The use of a pressure reducing valve may limit the flow of water in the household.

TEMPERATURE

Water temperature is not to exceed 110°F. Do not install the unit where it might freeze or next to a water heater, furnace or in direct sunlight.

LOCATION

Space Requirements

Allow 6-12 inches (150-300 mm) behind the unit for plumbing and drain lines and 4 feet (1.3 meters) above for service access and filling the salt tank.

Floor Surface

Choose an area with a solid level floor free of bumps or irregularities. These floor conditions can cause the salt storage tank bottom to crack when filled with salt and water.

Drain

Select a nearby drain that can handle the rated drain flow (floor drain, sink or stand pipe). The drain line should be a minimum of 1/2". Overhead drains exceeding 4' above unit require 3/4" drain line.

NOTICE: Waste connections and drain outlets shall be designed and constructed to provide for connection to the sanitary waste system through an air gap of 2 pipe diameters or 1 inch, whichever is larger.

NOTICE: Observe all plumbing codes. Most codes require an anti-siphon device or air gap at the discharge point. The system and installation must comply with state and local laws and regulations.

NOTICE: Observe all State and local electrical codes.

Electrical

A 6 foot grounded cord is provided. It should be plugged into a 3-prong electrical outlet. Preferably one not controlled by a switch that can accidentally shut the unit down.



WARNING! ELECTRICAL SHOCK HAZARD! DO NOT REMOVE THE GROUNDING PRONG. IF THE RECEPTACLE IS DESIGNED FOR A 2-PRONG PLUG. OBTAIN A 3-PRONG ADAPTER AND GROUND IT SECURELY. DO NOT USE EXTENSION CORDS.

Table 1 - Water Limitations

	SM-60 TWIN	SM-90 TWIN
Hardness, Maximum (gpg)	60	90
Iron, Maximum (ppm)	5	5
Hardness (gpg) to Iron (ppm) ratio	8 to 1	8 to 1
Operating Pressure (psi)	20-120	20-120
Operating Temperature (°F)	33-120	33-120
Electrical Requirements	120 VAC/60 Hz	120 VAC/60 Hz

PLACEMENT

- Set the media tanks on a solid, level surface that provides easy access to a water supply, drain system and electricity.
- Place the brine system on a flat, smooth, solid surface close to the media tank.
- Plumbing should comply with the applicable local plumbing codes.
- Two lengths of 1-inch copper tubing (Fig. 2) is required to connect the control valve on tank #1 to the adapter on tank #2. A minimum spacing of one inch between the media tanks is recommended. Use the following chart to provide the one-inch spacing.

Tank Diameter	Tube Length
9-inch	6-inch
10-inch	8-inch

- Solder the copper tubes to the two brass yokes.
- Use the steel u-clips to join components together. Be sure to use the 3/8-inch machine screws when securing the clips to the brass components. Use the 9/16-inch thread cutting screws when assembling the clips to plastic components.
- Lubricate the distributor and tank o-ring seal with silicone lubricant.
- The joints near the drain must be soldered prior to connecting the drain line flow control fitting (DLFC). Leave at least 6" between the DLFC and the joints when soldering. Failure to do this could cause damage to the drain module. Teflon tape is the only sealant to be used on the drain fittings.

CONTROL VALVE

The control valve parts list on page 18/19 of the Model 9000 Service Manual shows item 35/36 button and retainer. These parts are not used on the Soft-Minder® Twin Control because the brine refill flow control is located in the body of the brine valve.

The programming regeneration cycle outlined in the Service manual is based on a 0/164 minute program wheel (2 minutes per pin hole). This control has 0/82 minute program wheel (1 minute per pin hole).

A white #1 eductor throat and nozzle is packaged with the control valve for use on the 9-inch tanks. The blue eductor throat and nozzle are used only with the 12-inch tank.

When changing the eductor nozzle and throat, remove the eductor assembly mounting screws. Carefully remove the eductor assembly from the control. Unscrew the eductor nozzle and throat and replace with the correct size eductor. Reassemble onto the control valve.

Included in the parts pack are (2) drain line flow controls with different gpm capacities. Tank size will determine which size flow control to install. Use the 2.00 gpm for the 9-inch tank and 10-inch tank.

Install the DLFC by removing the drain line elbow adapter. Unscrew the retainer, remove and replace with the proper size.

Install the retainer and the drain line elbow adapter. The numbered side of the DLFC must face down.

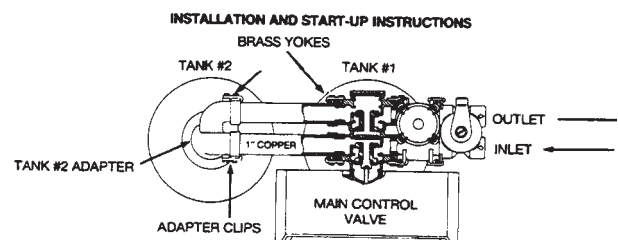


FIG. 2

Installation

START-UP

Place approximately 1" of water above the grid plate (if used) in your salt tank. Salt may be placed in the unit at this time.

Place softener in a bypass position. Turn on the main water supply and check for any leaks. Open a cold water faucet near the softener and run a few minutes until the system is free of any foreign material (usually solder) that may have resulted from the installation.

Shift the bypass into the service position so that water flows into the mineral tanks. When water flow stops, open a cold water faucet and allow to run until air pressure is relieved.

Electrical connections must be connected according to codes.

Plug unit into electrical outlet. Do not insert meter cable into the meter at this time.

TIMER SETTINGS

The manual line drawings (Fig. 3) illustrate a 0/164 minute program wheel or 2 minute per pin hole. This control has 0/82 minute program wheel, 1 minute per pin hole. Each hole represents one minute of regeneration time.

BACKWASH

The factory setting is 8 minutes (8 pins). To change the backwash time, add one pin to increase the backwash time by one minute. Decrease backwash time by removing a pin.

BRINE/RINSE

The factory setting is 54 minutes (54 holes). When changing brine/rinse, move the rapid rinse group of pins clockwise to increase the brine/rinse time or counterclockwise to reduce brine/rinse time.

TIMER SETTINGS

Rapid Rinse

The factory setting is 6 minutes (6 pins). Change the rapid rinse time by adding pins (increase) or remove pins (decrease) at the higher numbered end of the rapid rinse section.

Brine Tank Refill

Standard factory settings is 6 minutes (3 holes). Refer to Table 2, salt dosage vs. capacity, to determine if the settings require changing. When changing the refill time, move two pins at the end of the refill section.

NOTICE: The last two pins at the end of the refill section must not be eliminated. This will result in refill continuing until the timer advances to the service position.

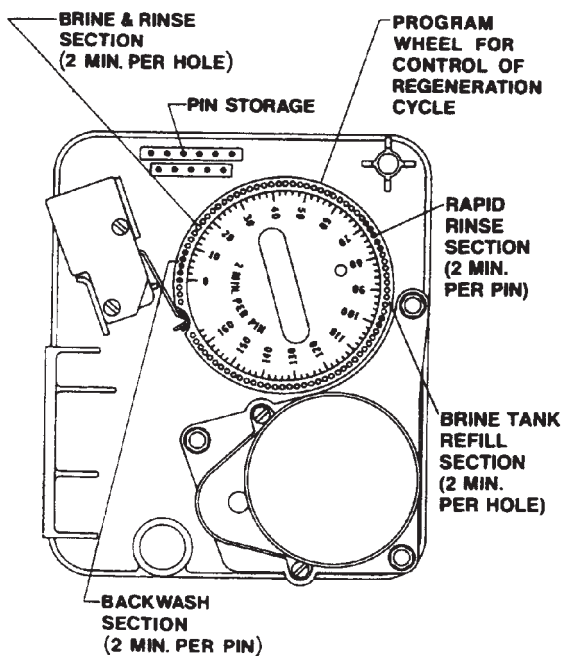


FIG. 3

Table 2 - Salt Dosage vs. Capacity vs. Timer Settings

Tank Diameter	Salt Dosage (lbs.)	Capacity* (grains)	Refill Time (minutes)
9-inch	3	14,600	2
	9	29,400	7
	15	33,800	11
10-inch	4.5	21,900	3
	13.5	44,000	10
	22.5	50,700	17

GALLON WHEEL SETTINGS

The model 9000 valve regenerates with soft water from the other tank, you must subtract the water used for regeneration. If 1000 gallons are available then you must subtract the regeneration water used from the total water available.

If there are 1000 gallons available subtract the regeneration water used from total water available.

$$\begin{array}{rcl}
 1000 & & 51 \\
 \text{gallons} & \text{—} & \text{gallons} \\
 \text{available} & & \text{used} \\
 & & = \text{949} \\
 & & \text{gallons} \\
 & & \text{returning} \\
 & & \text{(in regeneration)}
 \end{array}$$

The meter wheel should be set at 950 gallons. Lift the inner dial of the meter program wheel (Fig. 4) so that it rotates freely. Position the white dot opposite the 950 gallon setting.

NOTICE: There is some delay from the time the meter zeros out and when the cycle starts. Typically on residential equipment this delay is not critical. In commercial applications this must be taken into consideration. These 9 and 18 minute continuous flows should be subtracted from the available water supply.

- Insert meter cable into the meter.
- Check bypass.
- Plug in unit.

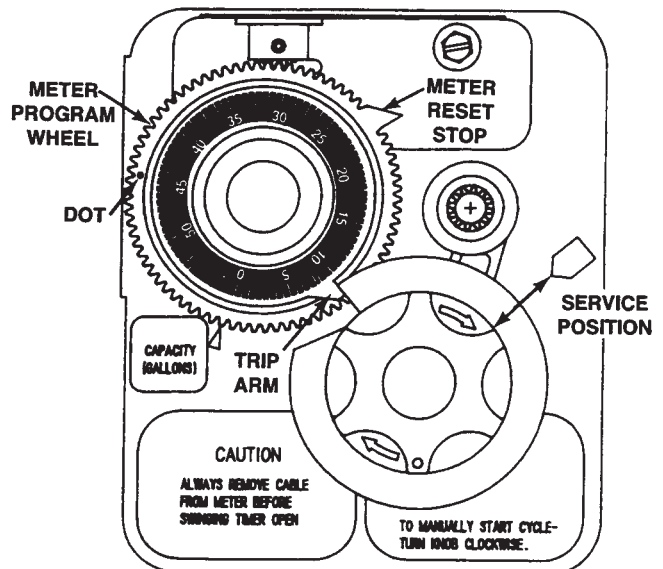


FIG. 4


Installation

Sanitizing Procedure

A water softener in daily use on a potable water supply generally requires no special attention other than keeping the salt tank filled. Occasionally, however, a unit may require sanitization under one of the following conditions:

- At start-up time.
- After standing idle for a week or more.
- On private supplies, the appearance of off-tastes and odors, particularly if musty or "rotten egg" (caused by harmless sulfate-reducing bacteria).

Note: If the water supply contains iron, regenerate the softener before sanitizing to remove iron from the resin.



CAUTION! HAZARD FROM TOXIC FUMES! CHLORINE BLEACH AND COMMON IRON CONTROL CHEMICALS MAY GENERATE TOXIC FUMES WHEN MIXED.

- IF THE UNIT USES CULLIGAN SOFNER-GARD® OR OTHER COMPOUNDS CONTAINING SODIUM HYDROSULFITE, SODIUM BISULFITE, OR ANY OTHER REDUCING AGENT, DISCONNECT THE DEVICE FEEDING THE CHEMICAL(S) AND MANUALLY REGENERATE THE UNIT BEFORE SANITIZING.
- DO NOT USE THIS PROCEDURE IF THE SOFTENER SALT CONTAINS IRON CONTROL ADDITIVES.

1. Remove the brine tank cover.
2. Pour directly into the brine chamber 1/3 - 1/2 cup of common household bleach (5.25% sodium hypochlorite) for each cubic foot of resin in the tank. **Do not use lemon scented bleaches, or similar bleaches that contain perfumes.**
3. Manually start recharge. Allow the unit to complete the recharge cycle automatically.

If tastes and odors return frequently, even after sanitization, a continuous chlorination system may be needed. Send a water sample to a qualified laboratory for bacterial analysis.

Analyzing the System

Analyzing the problem involves three basic steps:

1. Check the system in all cycle positions.
2. Compare the data to normal operating data.
3. Determine which component may cause the problem (troubleshooting).
4. If steps 1-3 did not reveal the problem, initiate a regeneration cycle and manually cycle the valve to brine draw (#2 position). Allow the unit to complete the brine draw cycle and observe how the system reacts.

Although it may be possible to solve a specific problem simply by changing a component, analyzing the entire system can reveal additional problems which would otherwise require extra service calls. "Parts changing" is not the same as service.

Check the System

The following tools are needed to collect data:

1. Hardness, iron and chlorine test kits
2. Thermometer
3. Pressure gauge, 0-120 psi
4. 5-Gallon bucket and watch
5. Calculator

The customer can provide most data. By collecting data prior to a service call, a "first guess" about the cause of the problem can be made and the need for any special parts can be determined. If the problem is as simple as lack of salt in the brine tank, a service call may not be needed at all. At the end of Appendix A is a recommended system data sheet that will assist the troubleshoot process.

Before Leaving the Installation Site

Sanitizing the softener. See sanitizing procedure on previous page.

Ensure that the brine tank has water to the level of the float. Add water to the tank with a hose or put the unit into a full recharge so that the brine refill cycle will fill the tank with the proper amount of water.

The water heater will hold hard water for several days. Advise the customer that the existing water volume in the tank will need to be used before the hot water is soft. If soft hot water is required immediately, refer to the water heater owner's manual for the proper method of draining the water heater.

Explain the operation of the softener to the customer. Make sure the customer knows that there will be new sounds associated with the recharging of the unit. Advise the customer to periodically check and replenish the salt supply.

Clean up the unit and installation site, removing any soldering, or pipe threading, residues from the equipment and surrounding area with a damp towel.

Salt Supply, Usage & Service

Salt is the mineral used to “recharge” your water conditioner. A brine solution is automatically made up in the bottom of the salt storage container, the Cullex® resin beads in the mineral tank are flushed with the brine solution as a step in the recharging process.

Your Culligan Water Conditioner has been carefully designed to get the greatest amount of softening capacity from the salt it uses. Here is some pertinent information about salt usage, types and service.

Salt Economizer

This control is set at the time of installation, and determines salt usage according to the water hardness, number of persons in the household, and water usage.

What Kind of Salt is Best

All Culligan Water Conditioners are designed to use any water conditioner salt of good quality, including “rock”, “pellet”, “solar”, or “evaporated” types.

All rock salt, regardless of source, contains insoluble material which collects at the bottom of the salt storage tank and requires periodic clean-out.

If purified salt products are used, the salt storage compartment will require less frequent clean-out, but you must check more frequently for “bridging”.

Regardless of what type of salt is used, we recommend Culligan Brand Salt as suggested by your Culligan Dealer. He or she is the expert and can provide you with the best product for your Culligan Water Conditioner.

Automatic Salt Delivery Service

Ask your Culligan Dealer for details about salt delivery service. You can have your salt supply replenished on a regular basis. Whether you have automatic delivery service or pick up salt from your Culligan Dealer, you will be getting quality salt packaged according to rigid Culligan specifications. Using Culligan Brand Salt will help assure continued efficiency and trouble-free operation of your water conditioner.

SODIUM INFORMATION: *“Water softeners using sodium chloride for regeneration add sodium to the water. Persons who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake.”*

Care and Cleaning of Your Water Conditioner

Following these simple precautions will help assure continued trouble-free service and keep your Culligan Water Conditioner looking like new for years.

1. Do not place heavy objects on top of the salt storage tank or timer cover.
2. Use only mild soap and warm water when cleaning the exterior of the conditioner. Never use harsh, abrasive cleaning compounds or those which contain acid, such as vinegar, bleach and similar products.
3. **Important: Protect your water conditioner and the entire drainline from freezing temperatures. DANGER: If your unit should freeze, do not attempt to disassemble it. Call your Culligan Dealer.**
4. **Important: Culligan water softeners are sold for use on potable water, only. If at any time the water becomes contaminated, such as during a “boil water” situation, the operation of the water softener should be discontinued until it is verified that the water is again potable. To do this, push the red knob on the back of the water softener against the barrel of the bypass valve. Then, call your Culligan dealer to have your system sanitized before it is placed back into service.**
5. Should service, adjustment or trouble-shooting information be needed which is not covered in the Owners Guide/Installation Supplement, call your Culligan Dealer.

Note: *Following the manufacturer's instructions regarding operation, maintenance and replacement requirements, including replacement of filters if applicable, is essential for Culligan's products to perform as advertised.*

If you have further questions, please call your local independently operated Culligan dealer. He or she will be glad to be of assistance to you.

Care & Cleaning

To Clean Out the Salt Storage Tank

A periodic clean-out of the Salt Storage Tank is necessary to keep your Culligan Water Conditioner at peak operating efficiency. Do it at least every 2 years when the salt supply is low. Follow these step-by-step procedures:

Tools needed:

- Scoop
- Clean, bucket-size container
- Phillips-head screwdriver
- Garden hose
- Household scrub brush or sponge

1. Remove the salt storage tank cover and the cap from the brine valve chamber.
2. Lift the brine valve out of the brine valve chamber and set aside in an upright position.
3. If you'd like to save any clean, dry salt remaining in the tank, remove it and place it in a clean container.
4. Using the scoop, dig out and discard as much remaining salt, water and debris as possible.
5. Remove the brine valve chamber by removing the screws on either side of the salt tank.
6. Remove the salt plate at the bottom of the brine tank.
7. Lay the salt tank on its side and direct a brisk stream of water from your garden hose to its inside to rinse out all residue.
8. Using a household scrub brush and a mild soapy solution, clean the salt plate. This will complete the tank cleaning.
9. Stand salt tank upright. Replace the salt plate. Place brine valve chamber in position and affix with screws.
10. Insert the brine valve into the chamber and replace brine valve chamber cap.
11. Fill the salt storage tank with 4 to 6 inches of water.
12. Fill the tank with salt to within a few inches of the top.
13. Replace salt storage tank cover.

When and How to Bypass Your Water Conditioner

Normally, all water except outside lines passes through the water conditioner. There are times when the water conditioner should be bypassed, using the push-button Bypass Valve, or a 3-way bypass valve. You should bypass:

1. If lines to outside faucets do not bypass the water conditioner, and you do not want to waste soft water on lawn sprinkling or other outside uses.
2. If you are going away on vacation and want to save salt by not having the unit recharge while you're away.

Things to Check Before You Call For Service

If you unexpectedly experience hard water, make these simple checks before calling your Culligan dealer. One of the following conditions may be the reason for your interruption of service.

Important

If any of the following conditions is found, the water conditioner should be manually recharged according to instructions on page 9 after you have corrected the problem.

Power Supply

Check your power supply cord. Is it plugged fully into the electric outlet? Be certain that the outlet is not controlled by a wall switch which has been turned off. Reset conditioner to proper time of day and then plug in.

Blown Fuse

Check the house fuse or circuit breaker panel. Replace a blown-out fuse or reset an open circuit breaker.

Power Failure

Any interruption in your power supply or time changes - such as daylight savings - will disrupt your conditioner's recharge schedule by causing the timer to run off-schedule. Reset timer to proper time of day.

Bypass Valves

Check to see if they are in the proper position. Cul-Flo-Valv® Bypass, if used, should be in the "Push for Service" position. If hand valves are used, see that inlet and outlet valve are opened and that the bypass valve is closed.

No Water

If you aren't getting any water flow at all, make sure your water supply is working. Open a tap ahead of the conditioner (outside tap) to see if you have any water pressure. If you have water pressure, check the bypass valve. If it is in the Service position, put it into the bypass and call your Culligan dealer for service.

Increased Usage

Guests, family additions, new water-using appliances, etc., all will result in more water usage and will require more capacity from your conditioner. You can reprogram your recharging schedule by following the directions on pages 9 and 10. Call your Culligan dealer for advice and save a service call.

Salt Supply

Check it. Refill if necessary and wait approximately 4 hours for salt to dissolve before initiating a recharge cycle.

Salt Bridging

Salt bridging occurs when a space is formed between the salt and the water underneath, preventing the salt from dissolving to make brine. No brine, no soft conditioned water!

High humidity and/or use of some brands of purified salt products may cause a salt bridge to form.

The best way to check and eliminate a salt bridging problem is to take a broom handle or similar instrument and make a mark 34 inches from the end. Then carefully begin to probe down through the salt with the instrument. Should an obstruction be found before the mark on your instrument reaches the rim of the salt storage tank, a salt bridge is likely to have formed. Continue to probe and break the salt bridge completely.



Caution! Do not force the implement past the mark as damage to the horizontal salt plate may occur.

Performance Data Sheet

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than sixty-five years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

IMPORTANT NOTICE: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

MANUFACTURER: Culligan International Company,
9399 West Higgins Road, Suite 1100, Rosemont, IL 60018 USA
(847) 430-2800

PRODUCT: Culligan Soft-Minder Twin™ 60 Water Softener

TESTING CONDITIONS & RESULTS:

Flow Rate:	10.4 gpm	Capacity:	14,600 grains @ 3.0 lb. salt
Pressure:	30 - 40 psi		29,400 grains @ 9.0 lb. salt
Acidity:	Non-Corrosive		33,800 grains @ 15.0 lb. salt
Temperature:	68° (20°C)	Efficiency Rated Dosage†:	4,880 gr/lb
pH:	7.6		

SOFTENER SPECIFICATIONS:

Maximum Flow Rate:	10.4 gpm (xx Lpm)
Pressure Drop at Maximum Flow Rate:	15 psi (xx kPa)
Operating Temperature Range:	33 - 120°F (1 - 50°C)
Maximum Drain Flow Rate:	1.6 gpm (6.1 Lpm)
Working Pressure Range:	20 - 120 psi (140 - 860 kPa)
Operating Pressure Range (Canada):	20 - 90 psi (140 - 620 kPa)



The Culligan Soft-Minder Twin Water Softeners are tested and certified by WQA against WQA S-100 for the effective reduction of calcium and magnesium (hardness).

This softener is efficiency rated, it has a Demand Initiated Regeneration (D.I.R.) feature which complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in their operation. The softener has a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt used (based on NaCl equivalency), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI Standard 44. This test represents the maximum possible efficiency that the system can achieve. Operational efficiency is the actual efficiency achieved after the system has been installed. Operational efficiency is typically less than the efficiency due to individual application factors including water hardness, water usage, and other contaminants that reduce the softener's capacity.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

NOTICE: This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

† The efficiency rated dosage is only valid at the 3 lb salt dosage for 9" models.

Buyer Signature _____ Date _____
Seller Signature _____ Date _____

Performance Data Sheet

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than sixty-five years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

IMPORTANT NOTICE: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

MANUFACTURER: Culligan International Company,
9399 West Higgins Road, Suite 1100, Rosemont, IL 60018 USA
(847) 430-2800

PRODUCT: Culligan Soft-Minder Twin™ 90 Water Softener

TESTING CONDITIONS & RESULTS:

Flow Rate:	10.4 gpm	Capacity:	21,900 grains @ 4.5 lb. salt
Pressure:	30 - 40 psi		44,100 grains @ 13.5 lb. salt
Acidity:	Non-Corrosive		50,700 grains @ 22.5 lb. salt
Temperature:	68° (20°C)	Efficiency Rated Dosage†:	4,880 gr/lb
pH:	7.6		

SOFTENER SPECIFICATIONS:

Maximum Flow Rate:	10.4 gpm (xx Lpm)
Pressure Drop at Maximum Flow Rate:	15 psi (xx kPa)
Operating Temperature Range:	33 - 120°F (1 - 50°C)
Maximum Drain Flow Rate:	1.6 gpm (6.1 Lpm)
Working Pressure Range:	20 - 120 psi (140 - 860 kPa)
Operating Pressure Range (Canada):	20 - 90 psi (140 - 620 kPa)



The Culligan Soft-Minder Twin Water Softeners are tested and certified by WQA against WQA S-100 for the effective reduction of calcium and magnesium (hardness).

This softener is efficiency rated, it has a Demand Initiated Regeneration (D.I.R.) feature which complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in their operation. The softener has a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt used (based on NaCl equivalency), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI Standard 44. This test represents the maximum possible efficiency that the system can achieve. Operational efficiency is the actual efficiency achieved after the system has been installed. Operational efficiency is typically less than the efficiency due to individual application factors including water hardness, water usage, and other contaminants that reduce the softener's capacity.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

NOTICE: This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

† The efficiency rated dosage is only valid at the 4.5 lb salt dosage for 10" models.

Buyer Signature _____ Date _____
Seller Signature _____ Date _____

Records & Data

Records and Data

Important Data on Your Water Conditioner

It is advisable to have the salesperson or installer fill in the information below for your future reference. If this has not been done, please ask for it, as it is necessary if you contact your dealer.

IDENTIFICATION

Model Name _____ Catalog No. _____

Control Model No. _____ Control Serial No. _____

Date of Installation _____ Tank Serial No. _____

SETTINGS

Salt Setting _____ lbs.

Time of Recharge: _____ a.m. _____ p.m.

Gallons to signal _____ gallons

Number of people in household

WATER ANALYSIS

Total Hardness _____ (gpg) Total Iron _____ (ppm) pH (acidity) _____

Other

Culligan Limited Warranty

Culligan Soft-Minder Twin™ Automatic Water Conditioners

You have just purchased one of the finest water conditioners made. As an expression of our confidence in Culligan International Company products, your water conditioner is warranted to the original end-user, when installed in accordance with Culligan specifications, against defects in material and workmanship from the date of original installation, as follows:

For a period of ONE YEAR	The entire conditioner
For a period of THREE YEARS	Soft-Minder® meter.
For a period of TEN YEARS	The control valve body, excluding internal parts
	The salt storage container, brine valve and all its component parts
For the LIFETIME of the original consumer purchaser	The Quadra-Hull™ conditioner tank and the Cullex® resin

If a part described above is found defective within the specified period, you should notify your independently operated Culligan dealer and arrange a time during normal business hours for the dealer to inspect the water conditioner on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

We are not responsible for damage caused by accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, oxidizing agents (such as chlorine, ozone, chloramines and other related components), alteration, installation or operation contrary to our printed instructions, or by the use of accessories or components which do not meet Culligan specifications, is not covered by this warranty. Refer to the specifications section in the Installation and Operating manual for application parameters.

Our product performance specifications are furnished with each water conditioning unit. TO THE EXTENT PERMITTED BY LAW, CULLIGAN DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; TO THE EXTENT REQUIRED BY LAW, ANY SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE-YEAR PERIOD SPECIFIED ABOVE FOR THE ENTIRE CONDITIONER. As a manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing a water conditioner. The quality of water supplies may vary seasonally or over a period of time, and your water usage rate may vary as well. Water characteristics can also differ considerably if your water conditioner is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source. OUR OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE WATER CONDITIONER, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES.

Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Consult your telephone directory for your local independently operated Culligan dealer, or write Culligan International Company for warranty and service information.

CULLIGAN INTERNATIONAL COMPANY
9399 West Higgins Road, Suite 1100
Rosemont, Illinois 60018

Promise

With Culligan You Get More Than a Quality Product

You Get Your Water Expert, The Culligan Man

We're here to provide you with fast, dependable service, making sure any problems you have are taken care of. The Culligan Man has been around for over sixty years, delivery dependable service all along. That's why people say "Hey, Culligan Man!" Because we're the water experts. And that's who you want taking care of your water.

The Culligan Promise

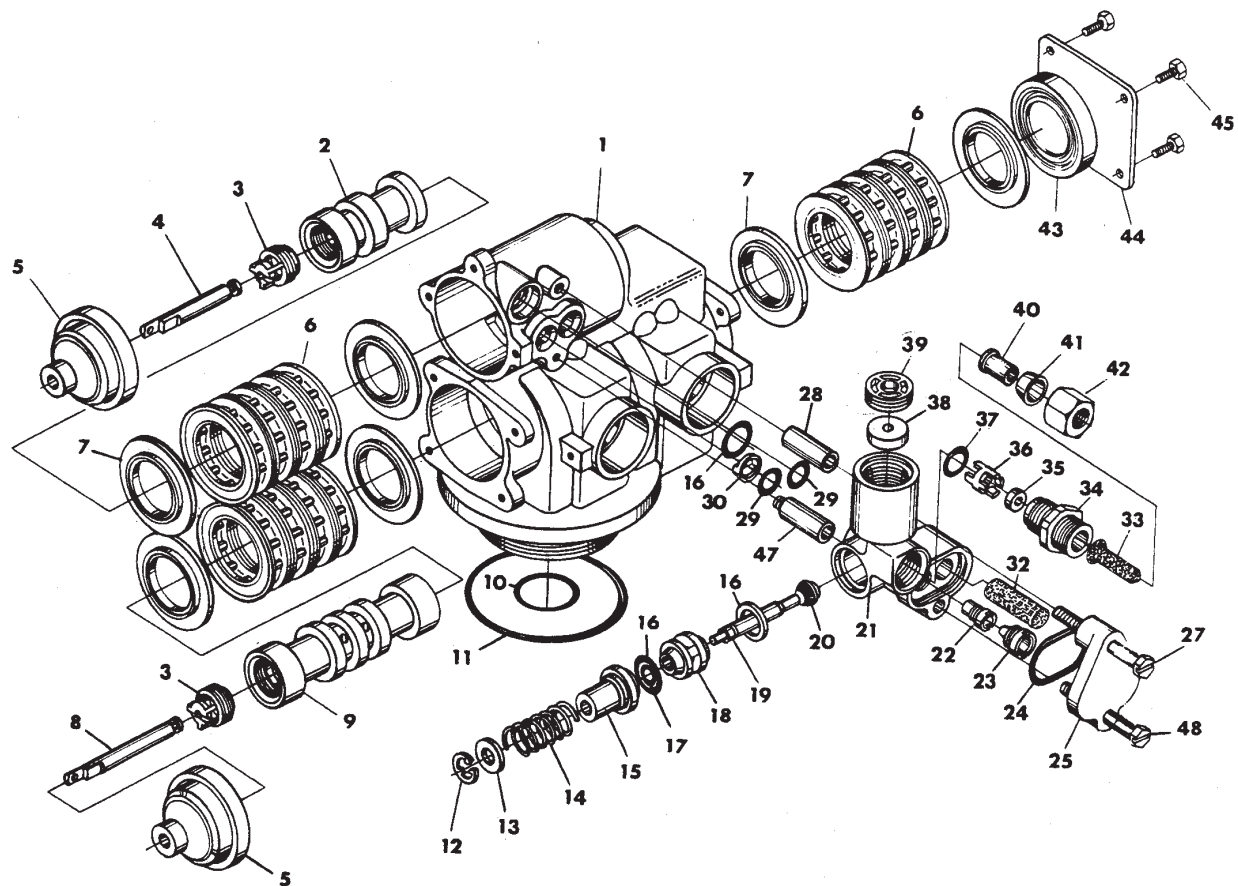
At Culligan, we understand that a water quality improvement system is an investment in your family's well-being. That's why our 1,350 independently operated dealers worldwide don't just sell products; they sell water quality you can count on. We stand behind our products with written limited warranties and our unequaled Culligan service. No matter where you live, you can depend on Culligan expertise to work for you — today and tomorrow.



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Parts List

Control Valve



Control Valve Parts List

Item No.	Part No.	Description	Qty.
	01-0028-90	Control Valve 3/4" NPSM	
1	01-0029-04	Valve Body, 2-1/2" - 8 ACME, Sept. 1993/Present	1
2	00-4020-07	Piston, Upper	1
3	00-4020-08	Piston Rod Retainer	2
4	00-4020-05	Piston Rod, Upper	1
5	00-4020-06	End Plug Assembly	2
6	00-4020-03	Spacer	12
7	00-4020-04	Seal	15
8	00-4020-01	Piston Rod, Lower	1
9	00-4020-02	Piston, Lower	1
10	00-4018-61	O-ring	1
11	00-4019-98	O-ring, Tank Top	1
12	00-4019-99	Retaining Ring	1
13	00-4019-96	Washer, Brine Valve	1
14	00-4019-97	Spring, Brine Valve	1
15	00-4019-94	Brine Valve Cap	1
16	00-4019-95	O-ring, Brine Spacer	3
17	00-4019-92	Quad Ring	1
19	00-4019-93	Brine Valve Stem	1
20	00-4019-90	Brine Valve Seat	1
22	00-4019-91	Throat, No. 0 (Red)	1
	00-4019-88	Throat, No. 1 (White)	1
23	00-4019-89	Nozzle, No. 0 (Red)	1
	00-4019-86	Nozzle, No. 1 (White)	1
24	00-4019-87	O-ring, Injector Cover	1
27	00-4019-84	Screw, Injector Mtg.	1
29	00-4019-85	O-ring, Injector	2
31	00-4019-82	O-ring, D.L.F.C.	1
32	00-4019-83	Injector Screen	1
33	00-4019-80	Screen, Brine Line	1
34	00-4019-81	Fitting, Brine Line	1
38	00-4019-78	Flow Control, 1.2 GPM	1
	00-4019-79	Flow Control, 1.5 GPM	1
48	00-4019-77	Screw, Injector Mtg.	1
*	01-0019-42	3/4" Bypass Valve	1
*	00-4400-09	Drain Elbow Adapter	1

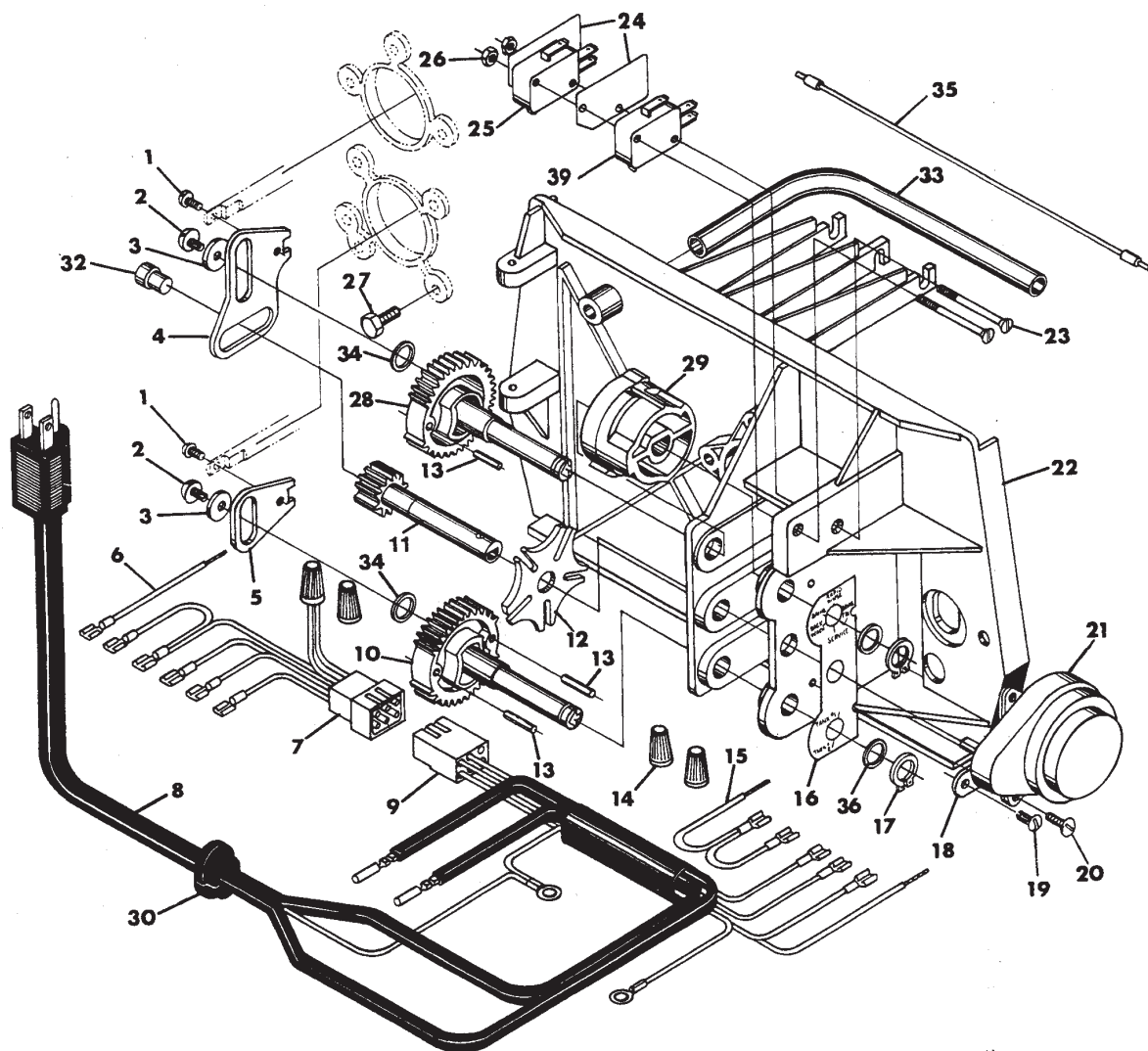
* Not shown

NOTE: Items 35, 36, 37, 40, 41 and 42 are not used.

For Items 18, 21, 25, 26, 28, 30, 39 and 43-47, call your local Culligan Dealer. To locate your nearest dealer, call 800-285-5442.

Parts List

Drive Assembly



Parts List

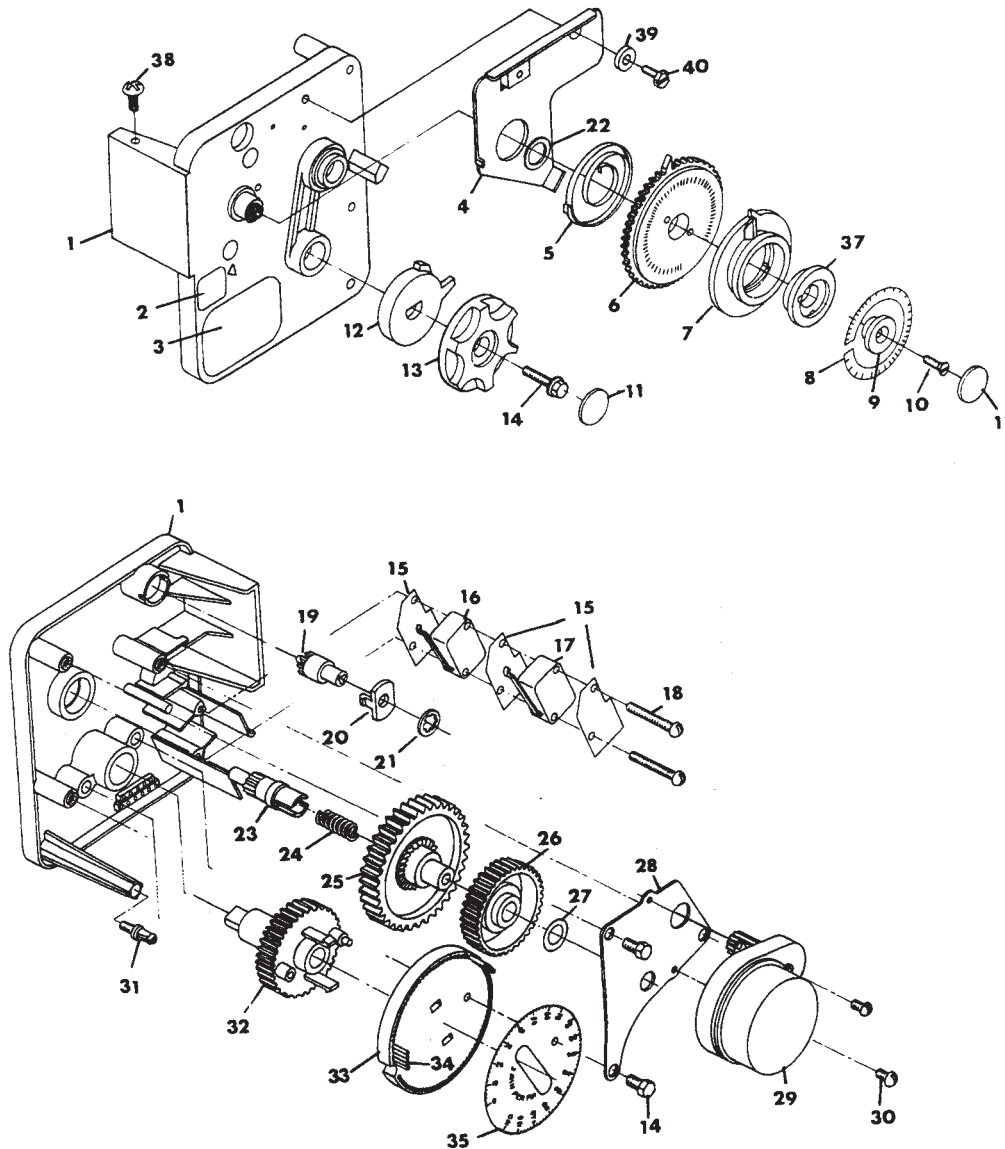
Drive Assembly Parts List

Item No.	Part No.	Description	Qty.
1	00-4020-22	Screw, Piston Rod	2
2	00-4020-19	Screw, Piston Rod Link	2
3	00-4020-20	Washer	2
7	00-4020-17	Wiring Harness, Timer	1
8	00-4020-18	Power Cord	1
9	00-4020-15	Wiring Harness, Drive	1
17	00-4020-16	Retaining Ring	2
20	00-4020-13	Screw, Motor Mtg.	2
21	00-4020-14	Motor, 120V/60 Hz.	1
23	00-4020-11	Screw, Switch Mtg.	2
26	00-4018-72	Nut, Switch Mtg.	2
27	00-4020-12	Screw, Valve Mtg.	7
32	00-4020-09	Guide Pin	1
35	00-4018-24	Meter Cable	1

NOTE: For Items 4-6, 10-16, 18, 19, 22, 24, 25, 28-31, 33, 34 and 36, call your local Culligan Dealer. To locate your nearest dealer, call 800-285-5442.

Parts List

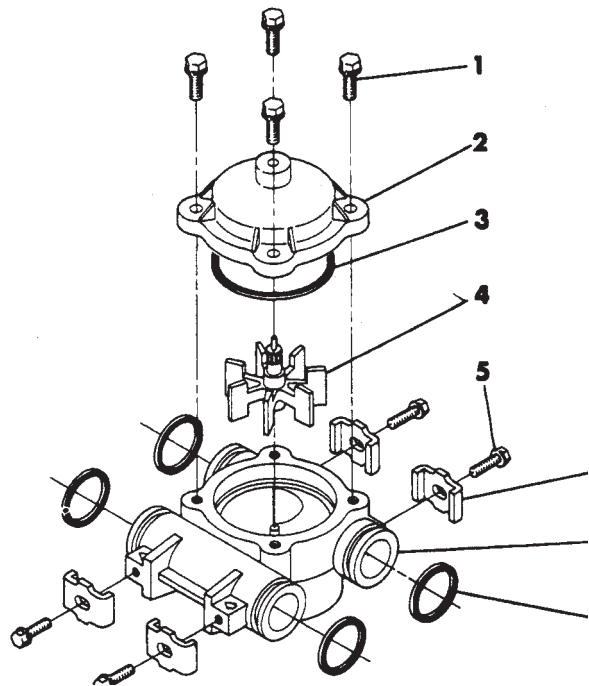
Timer Assembly Parts List



Item No.	Part No.	Description	Qty.
—	00-4020-21	Timer Assembly	1
16	00-4020-25	Switch	1
17	00-4020-26	Switch	1
19	00-4020-23	Drive Pinion	1
20	00-4020-24	Retainer	1
29	01-0019-41	Motor, 120V/60 Hz.	1
30	00-4018-23	Screw, Motor Mtg.	2

NOTE: For Items 1-15, 18, 21-28 and 31-40, call your local Culligan Dealer. To locate your nearest dealer, call 800-285-5442.

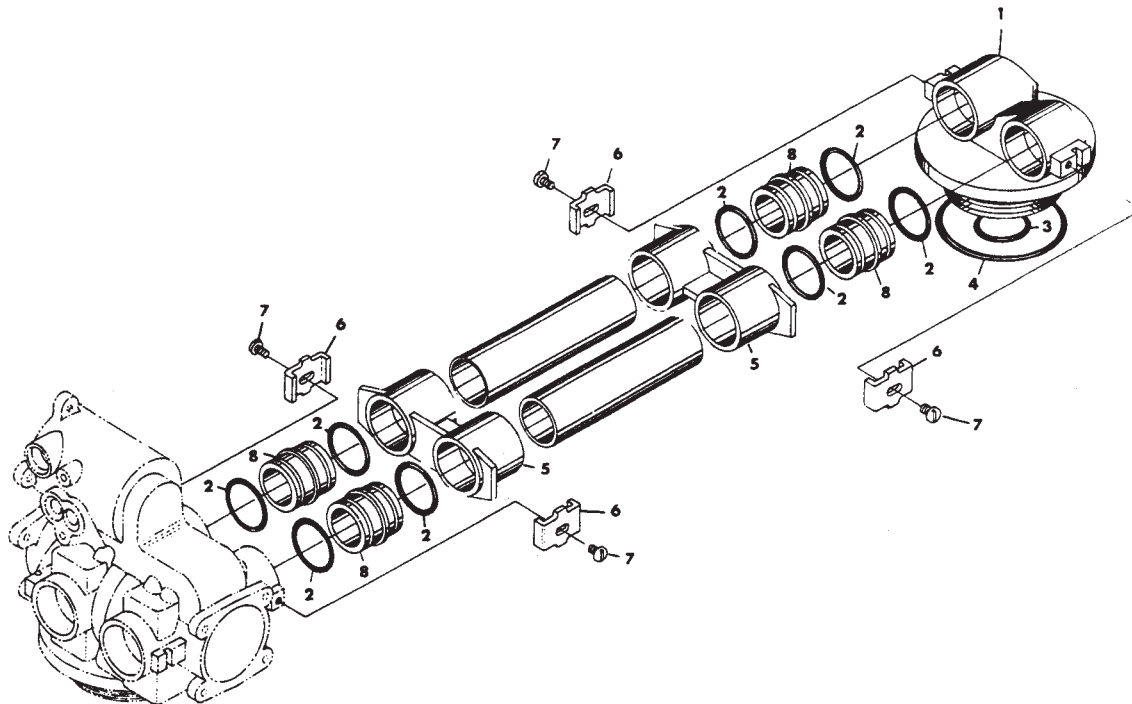
Meter Assembly Parts List



Item No.	Part No.	Description	Qty.
1	00-4019-71	Screw, Meter Cover	4
2	00-4019-68	Meter Cover Assembly	1
3	00-4019-69	O-ring, Meter Cover	1
4	00-4019-66	Impeller	1
5	00-4019-67	Screw, Clip	4
6	00-4019-72	Clip	4
7	00-4019-64	Meter Body	1
8	00-4019-65	O-ring, Meter Body	4
	01-0019-43	Meter Assembly	1

Parts List

Second Tank Adapter Parts List

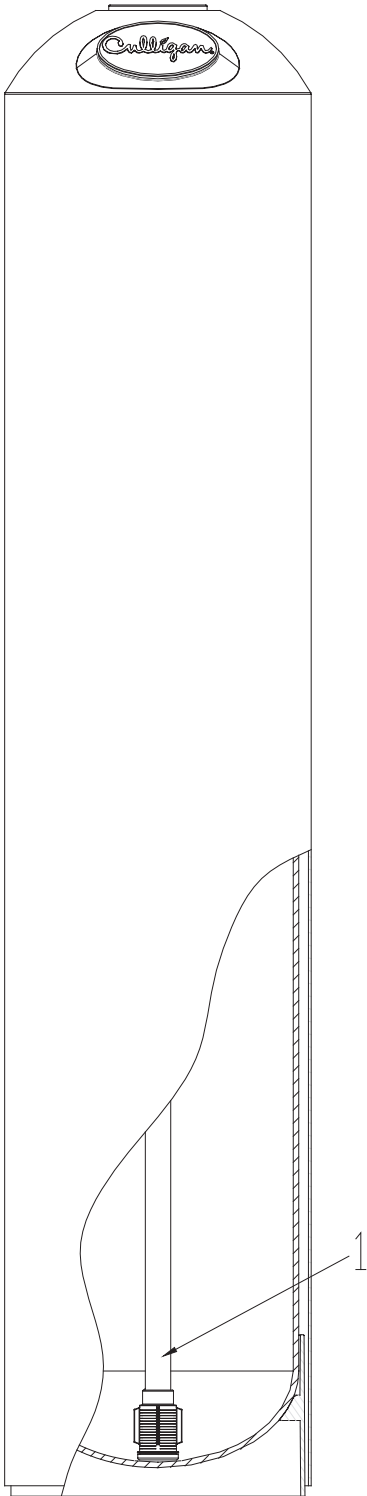


Item No.	Part No.	Description	Qty.
1	01-0052-21	Adapter, Tank #2, 2-1/2" -8 NPSM	
	01-0029-94	Adapter, Tank #2, 2-1/2" -8 ACME	
2	00-4019-74	O-ring, Coupling	8
5	00-4019-75	Yoke	2
6	00-4019-72	Clip	4
7	00-4019-73	Screw	4
8	00-4019-70	Coupling	4

NOTE: For Items 1, 3 and 4, call your local Culligan Dealer. To locate your nearest dealer, call 800-285-5442.

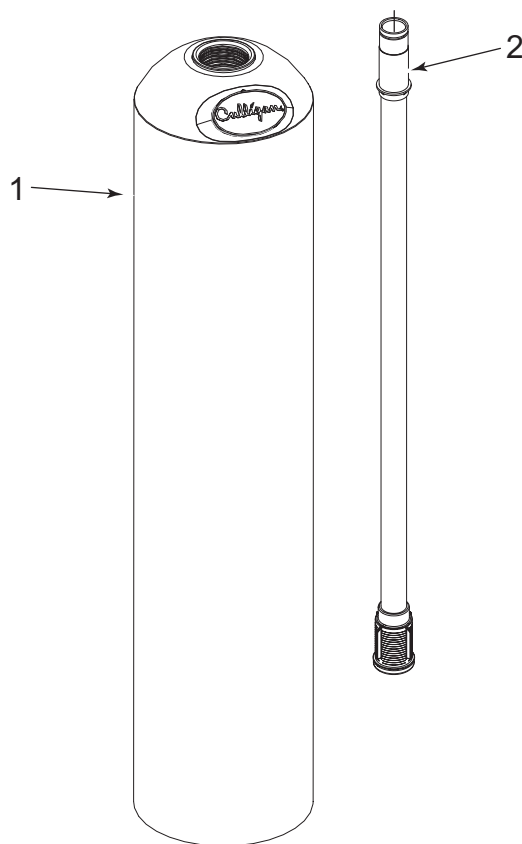
Conditioner Tank Parts List

Item No.	Part No.	Description
—	01-0164-96	Tank, 9", Complete
—	01-0164-97	Tank, 10", Complete
—	01-0163-47	Replacement Tank, 9" (Less Cullex® and Manifold)
—	01-0163-48	Replacement Tank, 10" (Less Cullex and Manifold)
1	01-0165-03	Manifold, 9" Tank
—	01-0165-04	Manifold, 10" Tank



Parts List

Tank Assembly



Item	Part Number	Description	Qty.
1	01-0164-96	Tank Assembly, 9" Aqua-Sensor®, Complete	
	01-0164-97	Tank Assembly, 10" Aqua-Sensor®, Complete	
	01-0163-51	Tank Assembly, 9" Soft-Minder®, Complete	
	01-0163-52	Tank Assembly, 10" Soft-Minder®, Complete	
	01-0163-49	Tank Replacement, 9"	
	01-0163-50	Tank Replacement, 10"	
3	01-0090-99	O-Ring, Manifold	1
4	01-0165-03	Outlet Manifold - 9" Tank	1
4	01-0165-04	Outlet Manifold - 10" Tank	1